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Major
Lt. R. D. Payne

CIRCULAR NUMBER 4

MEDICAL SECTION

GHQ FEC



Colonel John C. Fitzpatrick
Major Frederick R. Nichols
Major John V. Painter
Colonel Edward R. Watson
Colonel Edward R. Watson
Major

Director
Deputy Director
Chief, Supply and Fiscal Branch
Supply and Fiscal Branch
Chief, Plans & Operations Branch
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Plans and Operations Branch

ARMY
MEDICAL
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APR 30 1947

PERSONNEL DIVISION

I April 1947

Director
Deputy Director
Chief, Analysis Branch

Major
Major
Captain Joseph W. Jacobs

Articles for Publication in Circular

It is desired that the Monthly Circular Letter published by the Medical Section, GHQ, FEC, be of maximum value to all of the Medical Department personnel in the field. To that end, articles of professional or administrative nature that might be of general interest are needed. All Medical Department officers as well as the Commanding Officers of Medical Department units and the Surgeons of the major commands are solicited for articles of administrative or technical value. Such articles should be forwarded so as to reach the Medical Section, FEC, not later than the 20th of the month preceding the publication of the circular in which it is to appear.

GENERAL HEADQUARTERS
FAR EAST COMMAND
MEDICAL SECTION

CIRCULAR LETTER

NO 43

APC 31 500
1 April 1947

PART I

SUBJECT

ADMINISTRATIVE

SECTION

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I. Organization of the Medical Section

1. The following is a list of commissioned personnel currently assigned or attached to the Medical Section, GHQ, FEC:

Brig. General James A. Bethea Surgeon General (1) regarding the
Colonel John C. Fitzpatrick Deputy Surgeon and nurses
Major Frederick H. Gibbs Executive Officer graduate

ADMINISTRATIVE BRANCH

Major Frederick H. Gibbs Chief
Lt. Edwin W. Payne Assistant

PLANS AND OPERATIONS DIVISION

Colonel John C. Fitzpatrick Director
Major Frederick H. Gibbs Deputy Director
Major John V. Painter Chief, Supply and Fiscal Branch
Captain Robert E. Watson Supply and Fiscal Branch
Captain Felix G. Rajecki Chief, Plans & Operations Branch
Captain Glorio J. Patsy Plans and Operations Branch
Lt. T. J. Shelton Plans and Operations Branch

PERSONNEL DIVISION

Lt. Colonel Lewis C. Shellenberger Director
Major Sam A. Plemmons Deputy Director
Captain Joseph W. Jacobs Chief, Analysis Branch

CONSULTANTS

Colonel Charles K. Berle
Colonel Stanley C. Smock
Lt. Colonel Warner F. Bowers
Lt. Colonel Ruby F. Bryant
Lt. Colonel Wilfred A. Emond

Medical Consultant
Veterinary Consultant
Surgical Consultant
Nursing Consultant
Physical Standards

II. Non-Current Clinical Records

2. Information recently received from the War Department indicates that in numerous instances certain active hospitals in this theater are failing to comply with the provisions of paragraphs 8, 9, and 10 of War Department Pamphlet No. 12-14, September 1945, pertaining to the transfer of noncurrent clinical records to the Clinical Records Branch, AGO, 4300 Goodfellow Boulevard, St. Louis 20, Missouri.

3. It is necessary that all hospitals in this theater comply with the provisions of this War Department pamphlet. Particular emphasis is placed on paragraph 9a(c)(b) which states:

"To facilitate the interfiling of future clinical records with existing accumulations all hospitals will hereafter adopt the following procedures in the use of folders for clinical records:

- (1) Letter-size, kraft or manila (kraft preferred), medium weight, full-cut (unreinforced) tabs will be used.
- (2) The data indicated below will be typed on the clinical folder tab and verified to insure correctness. The typing will be in the upper case, beginning in the center of the tab, one typewriter space from the top edge.
 - (a) Last name, first name, and middle initial (in that order).
 - (b) Army serial number will follow immediately after the middle initial, separated therefrom by two typewriter spaces.
- (3) All papers forming a part of the clinical record, before being filed, will be securely fastened together, preferably by wire stapling. Clinical records need not be affixed to folders with metal fasteners.
- (4) If in addition to the individual's name and Army serial number, hospitals include the register number on the tab, that number will be lined out or otherwise deleted prior

to transfer of the folder to the Clinical Records Branch, AGO."

4. Clinical records as they become noncurrent should be forwarded through the Central Records Depot serving the area. Central Records depots are located as follows:

a. For units located in the Philippines-Ryukyus Command:

Central Records Depot No. 2
Philippines-Ryukyus Command
APO 75

b. For units located in Japan, Korea and the Marianas-Bonin Command:

Central Records Depot No. 4
Baksi Building No. 258
APO 343

III. Patient-Doctor Relationship

5. Patient-doctor relationship embraces so many aspects that a volume could easily be devoted to the subject. However, a few thoughts merit space in this circular.

6. There have been many attestations by patients regarding the many attentions given so cheerfully by physicians, dentists and nurses, and these are causes for pride. The manner in which a recent graduate deals with his patients is vital to the doctor as well as to the patient, because the doctor is developing his manner habits which will contribute so much to his success or failure throughout his professional career.

7. The current larger patient loads, both in hospitals and in dental clinics, will in a sense subject the physician or dentist to a test of his equanimity. When the professional man can genuinely manifest a kind and sympathetic manner in treating patients, even though the patients be many and the hour late, he will have achieved a qualification as valuable as any advance in technical knowledge.

IV. Promotion of Medical Department Officers

8. In announcing further restrictions on promotions for officers (WCL 24858 dated 28 February 1947), it is significant that the War Department excepted Medical Department officers who may be promoted under Par. 6 AR 605-12 dated 13 August 1946, and Change No. 1 dated 4 September 1946.

9. Every officer who has performed his duties efficiently and who could benefit from the provisions of the cited regulation should be

given such consideration. It is incumbent upon every surgeon to periodically review the status of officers under his technical supervision so as to assure that consideration of promotion has been given.

10. The Army is competing with many other agencies, both government and civilian, for the services of physicians, dentists, and veterinarians. It is logical and fair to effect promotions whenever possible for those officers efficiently serving the Army.

V. Professional Training Program in Army General Hospitals in the Continental United States (by a Medical Officer who Recently Arrived in this Theater from Madigan General Hospital).

11. Medical officers will be interested in the professional educational program now in operation in all general hospitals in continental United States. The program is similar in all hospitals. That at Madigan General Hospital, Tacoma, Washington, at which the writer has been stationed, is typical.

12. Monday afternoon at 1600, the laboratory service conducts a clinical pathological conference. At this time on alternate weeks, a particularly interesting case that has come to autopsy is taken up. The clinical history is given by the ward officer, x-ray findings discussed by the x-ray service and gross and microscopic findings presented and discussed by the laboratory service. A general discussion follows. On alternate weeks, the meeting consists of a presentation of gross and microscopic findings on all surgical specimens removed in operation.

13. Monday evening at 1800, a hospital professional meeting is held. This meeting is conducted in turn by the various professional services which usually designate a particular section in rotation. Medical officers from other organizations on Fort Lewis and civilian physicians are invited and a distinguished gathering is always present. A typical discussion at the meeting was the subject of "Surgical Aspects of Peptic Ulcer" by the general surgery section. Frequently, the discussion is illustrated by clinical cases. Following the meeting, refreshments are served by the Officers' Club.

14. On Tuesday morning, from 0830 till 1230, are held four lectures in the basic sciences of anatomy, physiology, pathology and pharmacology given by instructors from the University of Washington, School of Medicine. These lectures are of high calibre and extremely helpful to those who are working on specialty board requirements.

15. On Tuesday afternoon at 1600, a journal club meeting is held. Interesting articles from current journals are presented and discussed, the Chiefs of Service participating.

16. On Thursday afternoon, a civilian consultant makes ward rounds and interesting cases are discussed. The last hour of the afternoon is devoted to a seminar on a subject chosen by the consultant.

17. On Friday morning, four more lectures in the basic sciences are given, making a total of eight hours a week.

18. On Friday afternoon, the tumor board meets. All tumor cases are presented to the board, their diagnosis and treatment discussed and decided on.

19. On Saturday morning, from 0900 to 1200, grand rounds are conducted by the Chief of Service, frequently in company with a civilian consultant.

20. In addition, all autopsies are presented by the Laboratory Service after a clinical history is given by the ward officer and x-ray findings presented by the x-ray service. Many hospitals also hold a weekly x-ray conference where interesting and typical x-ray findings are discussed. Various sections, such as the Orthopedic Section, also hold their own ward round with the consultant and conducted x-ray conferences.

21. Physical facilities for these programs are excellent. A well stocked medical library with latest books and many current journals is available. Four small study rooms are furnished with comfortable easy chairs, rugs, ash trays and book shelves. A large assembly room is equipped with comfortable chairs, micro-projector, x-ray viewer, motion picture projector, slide projector and other visual aid equipment.

22. Attendance at all meetings is required of all Regular Army officers undergoing residency training at these hospitals.

23. In these days when civilian residencies are difficult to obtain and when obtained, are frequently crowded, the training offered in the Army general hospitals is second to none. Time spent at Madigan, as well as other Army general hospitals, is approved for residencies in General Surgery, Urology, Orthopedics, Anesthesia, General Medicine, O.B. and Gyn, Pathology and other specialties, provided attendance at the professional meetings is maintained.

VI. Change of MOS for Army Nurse Corps Officers

24. Unit rosters of Army Nurse Corps personnel submitted on Forms 8-164 show changes in MOS which appear to be made when the ward assignment of a nurse is made.

25. Attention is called to the qualifications for the various MOS classification as set forth in WD TM 12-406, dated February 1946. The fact that a nurse with an MOS of 3449 may be assigned to assist in the care of neuropsychiatric patients or to assist in the operating room does not necessitate the change of MOS.

26. The classification requirements for other than general duty nurses require additional training and experience as cited in WD TM 12-406, February 1946.

27. Attention is invited to Change 9, AR 40-20, 5 February 1947, regarding proper utilization of Army Nurse Corps personnel.

VIII. Recent War Department Directives:

28. a. Cir 332, War Department, 13 Nov 46, "Reports Control System."
- b. Change 9, AR 40-20, 5 Feb 47, "Army Nurse Corps - General Provisions."
- c. War Department Memorandum 600-510-1, 18 Feb 47, "Malingering."
- d. Change 3, AR 40-100, 8 Jan 47, "Miscellaneous Physical Examinations."
- e. Supplement to MR 1-9, Change No. 1, 15 Jan 47, "Physical Profile Serial."
- f. Sec II, War Department Cir 14, 16 Jan 47, "Monthly Report of Insect and Rodent Control."
- g. War Department Cir 33, 5 Feb 47, Sec I, "Bulletin of the United States Army Medical Department."
- h. War Department Cir 36, 7 Feb 47, "Military Neuro-psychiatry Training Program."
- i. War Department Cir 29, 31 January 47, Sec V, "Records Administration Center."
- j. War Department Memorandum 40-1085-1, 10 Dec 46, "Disposition of Exposed X-Ray Film."
- k. War Department Cir 147, "Disposition of Exposed X-Ray Film," 14 Apr 44, Rescinded by Sec IV, Cir 383, 31 Dec 46.

PART IISUBJECTTECHNICALSECTION

Summary of Influenza Situation to Date VIII
Theater Laboratory Service (Part I). IX

VIII. Summary of Influenza Situation to Date

The following is quoted from a memorandum from Philip E. Sartwell, M.D., Epidemiologist, Preventive Medicine Division, Office of The Surgeon General:

"1. The following is an account of circumstances leading to the decision to vaccinate troops in the United States against influenza and action taken to effect vaccination.

"a. An epidemic of influenza type A in the United States had been predicted by several epidemiologists on the basis of what is known of the periodicity of this disease. Since the laboratory recognition of the virus has been possible, epidemics of influenza A have occurred every two or three years in the United States. The last epidemic was in November - December 1943. It was therefore predicted that an epidemic might occur in the winter 1946 - 1947.

"b. The first definite indication of the disease was from AFPAC where respiratory disease admission rates for Japan and Korea began to rise in the week ending 20 December. Serological confirmation of influenza A was obtained in Japan. The epidemic seems to have reached a peak in mid January and begun to recede, at least in Japan. All personnel in the Tokyo - Yokohama area, where the epidemic was centered, were immunized during January and those in Korea are believed to have been vaccinated at the end of the month.

"c. The first recorded outbreak of influenza in the United States was at Fairfield-Suisun Army Air Field, California, in the middle of January. It is of interest that this is the airport of entry for military planes from the Pacific. The epidemic was mild and of short duration but subsequent serological tests showed that influenza A virus was apparently responsible. In late January a very sharp outbreak was experienced at Lowry Field, Colo. superimposed upon a previous high prevalence of streptococcal infections and common respiratory disease. The rise in incidence of respiratory infections and appearance of cases clinically resembling influenza began about 27 January, reaching its peak on 31 January, and by 7 February had subsided to a point where most of the infections then occurring were considered to be of the streptococcal type. All personnel at Lowry Field were vaccinated on 1 February. A third respiratory disease epidemic began at Fort Monmouth, New Jersey about 3 February. Clinically, the cases were typical of influenza. These cases are also mild, of brief duration, and without significant complications. The average duration of fever is said to be two or three days.

"d. Approximately 8 February an epidemic of respiratory infections said to resemble influenza began at Peterson Field, Colorado Springs, Colo., a distance of some 80 miles from Lowry Field. This outbreak is understood to involve also some of the personnel at Camp Carson, Colorado, where the cases from Peterson Field are hospitalized. It was necessary for Commanding Officer of the Camp Carson Station Hospital to request additional nursing personnel. About 13 February an outbreak began at Scott Field, Illinois. At this post personnel were vaccinated on 11 February, 2 days before the sharp increase in admissions occurred. The opinion at this post is that the illnesses are not related to vaccination.

"e. Relatively high respiratory disease admission rates have also developed during January at Fort Lewis, Washington; Indoctrination Division, Air Training Command, San Antonio, Texas; and Fort Knox, Kentucky. At both Fort Knox and San Antonio observations have indicated that the prevalent infections are clinically unlike influenza and are occurring to a very large extent among the basic trainees. This is contrary to experience at posts cited in paragraph c above where attack rate among the permanent party is thought to have been more nearly comparable to that among trainees.

"f. Laboratory findings as reported to date have been as follows. The epidemics at the posts mentioned in paragraph 1 c have all been confirmed. Those at Fairfield Suisun Army Air Base and Lowry Field have been confirmed by agglutination inhibition tests as due, at least in part, to influenza A. From one case in the Fort Monmouth epidemic a virus, type of which is as yet undetermined, has been isolated from throat washings. From the outbreak at Scott Field at least two serological specimens have been positive for influenza A by the agglutination inhibition tests.

"g. The general respiratory disease admission rate among troops in the United States which prior to January had been remarkably low, increased steadily and rather sharply beginning in the week ending 10 January. Rates for the last 6-week period are as follows:

<u>Week ending</u>	<u>Rate</u>
3 January	76 (this rate artificially low due to holiday furloughs)
10 January	104
17 January	119
24 January	147
31 January	174
7 February	188 (this rate reached the same level as that for the comparable week in 1946)

The sharpest increases in rates have occurred in the Second, Fourth, and Fifth Army Areas, the increase in the Second Army being largely influenced by the rates at Fort Knox, in the Fourth Army, by San Antonio, and in the Fifth Army, by Lowry Field.

"h. From civilian sources, on the other hand, no evidence has been obtained of an undue incidence of respiratory disease or of the detection of either of the influenza viruses. Certain unofficial reports indicate that respiratory diseases have been unusually frequent in the Denver area but Public Health officials have been unable to confirm this. In California where the first Army epidemic occurred, there have been no reports of increased prevalence among civilians. Reported incidence of influenza throughout the season has remained closely paralleled to that in the winter 1944 - 45 when no influenza was experienced either in the military or civilian.

"2. Decision was made on 8 February, after consultation with The Surgeon General, to undertake general vaccination of troops in the United States. The Commanding Officer, St. Louis Medical Depot was contacted by telephone and instructed to begin distribution of vaccine at once. Radiograms were sent to the Commanding Generals of all Armies, ZI, Commanding Generals, Army Air Forces and Army Ground Forces, advising them of this fact and stating that vaccination was to be accomplished in accordance with the provisions of Section I, WD Circular 312, 1946, upon receipt of vaccine. The U. S. Public Health Service, Bureau of Medicine and Surgery of the Navy, and the Army Epidemiological Board have been apprised of this decision. A radiogram was also sent to all overseas commands informing them of the state of affairs but stating that the War Department is making no recommendation respecting vaccination in overseas commands. This decision is to be left to the respective theater surgeons. A subsequent message sent to all major ZI commands on 14 February furnished the policy with respect to vaccination of civilians and dependents, and directed the vaccination of troops arriving in or departing from the United States, and of inductees, until 1 April.

"3. Radiograms have been received in response to the information furnished the overseas theaters as follows. The Alaskan Department has reported the occurrence within the past few days of a number of cases resembling influenza among troops arrived from the ZI. The decision has just been made to vaccinate troops in this Department. The Mediterranean Theater reports that there have been no outbreaks of respiratory disease and vaccination is not planned except possibly for troops returning to the ZI. No word has been received from the European Theater. It is understood, however, that an epidemic of influenza A is widespread in Sweden and there is also rumored to be a good many respiratory infections in the United Kingdom.

"4. The remaining supply of vaccine has been checked and appears to be adequate for the immunization of all troops in overseas areas as well as those entering the service in the next six weeks. There is not enough vaccine, however, for any considerable amount of vaccination of dependents and civilian personnel.

"5. From the unusually late onset of influenza this winter and its appearance at a small number of widely separated installations over a period of four weeks or more there is some reason to anticipate that there will not be a country wide epidemic of the disease. At all posts where influenza has appeared it has been described as mild in character and of short duration. Thus far there do not appear to have been any considerable number of streptococcal or other complications. Close attention will continue to be paid to the entire epidemiological picture which is one of unusual interest this season."

✓ IX. Theater Laboratory Service (Part I)

Lt. Col. W. D. Tigertt has prepared the following article. This is the first of three installments.

Laboratory service of the Far East Command is provided by laboratories forming integral parts of the various medical units and by the 3rd Medical General Laboratory, APO 900, which serves the Philippines and Ryukyus, and the 406th Medical General Laboratory, APO 500, which serves Japan, Korea, China, Guam and the Marianas.

Due to a shortage of suitable trained laboratory officers it is frequently necessary for medical officers without specialized training to supervise laboratory work. Regardless of whether an officer is directly charged with the supervision of a laboratory, all medical officers must appreciate the limitations of laboratory diagnosis and realize that care in the securing of specimens and choice in the tests requested are basic essentials for the performance of adequate laboratory diagnosis.

The laboratory is intended to supplement, not supplant, clinical diagnosis.

Scope of Various Laboratories: Reference should be made to TB Med 135 for the examinations to be accomplished in various laboratory installations under optimum conditions. Because of local conditions it is frequently necessary to deviate widely from the tests as outlined in that publication. Certain tests of necessity must be performed locally, either because of the need for a prompt answer or because of technical difficulties in transporting materials. It must be emphasized that poorly performed laboratory tests are worse by far than a complete absence of any type of laboratory. Each unit should confine its work to those tests that are absolutely essential and those tests that are within the techniques of the available personnel. Any procedure other than those for which a recurrent need is evident should be eliminated. The basic requirements include blood counts, urinalyses, darkfield examinations, fecal examinations for parasites, Standard Kahn Tests, simple blood chemical determinations and a minimum of bacteriological procedures.

Direct Communication: In order to facilitate transmission of specimens and of correspondence dealing with laboratory reports all laboratory

officers and other interested medical officers are authorized to communicate directly with other Army institutions designated to provide additional laboratory service to them. Any out of the ordinary request should be accompanied by a brief letter of explanation indicating the type of examination desired and the reason therefor. Questions as to the performance of any examination and communications dealing with epidemiological aspects of disease problems are particularly desired.

Specimens should be forwarded in the most expeditious manner, preferably by courier. Mail service should not be used. If requested the general laboratories will return the results of various tests by radiogram.

Laboratory Supplies: Routine medical supply channels are utilized except for diagnostic biologicals (Class 1,700,000) which are not listed in the Medical Supply Catalogue. These include diagnostic sera, bacterial antigens, Kahn antigen and complement and are obtained by direct requisition on the Medical General Laboratory serving the area.

Prepared Solutions: Units desiring standard solutions or who do not have the facilities for preparing various dyes and reagents should make requests therefor to the nearest hospital laboratory or to the Medical General Laboratory.

Applicable Publications:

1. TM 8-227. Methods for Laboratory Technicians (Cl and C2) - A new edition of this manual is expected shortly.
2. Laboratory Methods of the U. S. Army (Medical Department item #B220050) (5th Edition), Simmons and Gentzkow.
3. AFPAC Reg. 50-30. Histopathological Center, Autopsy Reports of specimens.
4. TB Med 19, Facilities Provided for Tissue Pathology.
5. TB MED 135. Functions and Scope of Medical Department Laboratories.
6. AR 40-310. Collection and Shipment of Specimens to Laboratories.
7. AR 40-305. Service Command and Department Laboratories.
8. AR 40-2140. Veterinary Laboratory Services.
9. Standard Methods for the Examination of Water and Sewage. 8th Edition. (Medical Department Item #B580050).

These publications represent the minimum required for any hospital laboratory. The first two publications deal directly with laboratory methods and should be available for reference whenever laboratory

work is performed.

Laboratory Journals: War Department Supply Bulletin 8-4, 21 March 1944, authorizes the following journals for hospitals. The journals included on the following page are those devoted primarily to laboratory work or which frequently contain articles of interest to laboratory officers.

Journals for Hospitals of 1,000 Beds and Over	Journals for Hospitals of 250-999 Beds Inclusive	Journals for Hospitals of 100-249 Beds Inclusive
American Journal of Clinical Pathology		X
American Journal of Public Health and the Nation's Health	X	
Archives of Pathology		
Journal of Bacteriology		
Journal of Infectious Diseases	X	X
Journal of Laboratory and Clinical Medicine	X	X
Proceedings of the Society for Experimental Biology and Medicine		
Venereal Disease Information	X	X

War Department Technical Bulletins: The following listed technical bulletins contain information directly pertinent to the performance and interpretation of laboratory results. These technical bulletins may be obtained by requisition on the nearest Adjutant General's depot.

MED 19 11 March 1944. Facilities Provided for Tissue Pathology in U. S. Army. Includes general provisions for histopathologic centers. Paragraph 3 includes a full description of the preparation of histopathologic materials.

MED 20 15 March 1944. Medical and Sanitary Data on the Mariana Islands.

MED 31 11 April 1944. Scrub Typhus Fever. General outline of this disease. Paragraph 8 b includes a statement that a titer of 1:160 may be recorded as significant but stresses the desirability of a series of agglutination tests. States that the agglutination titer usually reaches

its peak during the third week and begins to decline rapidly thereafter. Includes instructions for recovery of Rickettsia from the patient's blood in the early stage of the disease by mice inoculation.

MED 37 28 April 1944. Instructions for Operating Kit, Water Testing, Poisons, Treatment Control.

MED 47 28 May 1944. Control of Diseases of Respiratory System and Other Diseases Transmitted by Discharge from Respiratory Tract. States that concentration of 2 mgm. % of Para-amino benzoic acid may inhibit the growth of the meningococcus and gonococcus. States that 0.2 mgms. % of Para -amino benzoic acid is sufficient to neutralize concentration of sulphonamides encountered in most specimens and recommends that this be incorporated in culture media. Procaine Hydrochloride may be substituted in equal amounts.

MED 57 23 June 1944. Medical and Sanitary Data on Guam.

MED 68 18 July, 1944. Medical and Sanitary Data on Philippine Islands.

MED 78 4 August 1944. Taking of Blood Specimens. Forbids the use of unsterile syringe for drawing blood.

MED 82 8 August 1944. Sand-Fly (Pappataci, Phlebotomus) Fever. Unconfirmed reports indicate that this disease may occur in Southern Japan. Laboratory findings include leukopenia with a shift to the left of the neutrophils. Differential diagnoses include dengue and influenza.

MED 83 7 August 1944. Medical and Sanitary Data on the Izu, Bonin, Kazan, and Marcus Islands.

MED 108 24 October 1944. Medical and Sanitary Data on the Ryukyu Islands.

MED 111 3 November 1944. Medical and Sanitary Data on the Marshall Islands. Cl.

MED 119 November 1944. Bacillary Dysentery. Briefly describes microscopic picture of the stool in typical cases as contrasted with pictures seen in amebic dysentery. Recommends that specimens for culture be secured by rectal swab and describes the method. Indicates that S.S. agar and desoxycholate-citrate are useful for primary inoculation and briefly describes the biochemical reactions of the organisms. States that identification should be completed by a central laboratory.

MED 124 December 1944. Plague. Outlines the precautions necessary in any laboratory concerned with plague diagnosis. Briefly describes the appearance of aspirated buccal contents or sputum stained with methylene blue. States that inoculation of infectious material into mice, rats or

guinea pigs by any route produces death in one to three days.

MED 135 January 1945. Function and Scope of Medical Department Laboratories.

MED 138 February 1945. Cholera. Describes the common bacterial methods of diagnosis, including fecal smears. Recommends that alkaline peptone water (pH 8.0 to 8.4) be inoculated. After early growth suspected material should be streaked on the nutrient or infusion agar. Confirmation is by agglutination and biochemical reaction. Agglutination should be done at 37° rather than 56°. Indicates that *V. comma* may be inhibited by the ordinary media used for the isolation of other enteric pathogens. For isolation of the organisms from water recommends that 100 c.c. samples be inoculated into 10 c.c. of 10% peptone water.

MED 142 February 1945. Filariasis (Wuchereria) with Special Reference to Early Stages. States that microfilariae have been demonstrated rarely among soldiers in the Pacific. Recognizes that nocturnal appearance of the organisms may be demonstrated. Describes the concentration method of Knott. One c.c. of blood is mixed with ten c.c. of 2% formalin solution in an ordinary centrifuge tube. This is mixed and allowed to sediment for twelve to twenty-four hours. A smear of the sediment is stained with Methylene blue and eosin or Giemsa. The microfilariae measure about three hundred micra in length and are easily visible in the low power.

MED 143 February 1945. Cutaneous Diphtheria. Includes the usual laboratory examination, recommending that Loeffler's medium or an egg medium be used for initial isolation. Recommends virulence determination on any organisms having suggestive morphology and fermenting dextrose but not sucrose. The single animal method of Fraser is recommended. C-1 describes the "typical" ulcer and requires treatment if clinical appearance is suggestive.

MED 157 April 1945. Chancroid, Lymphogranuloma Venereum, and Granuloma Inguinale. Requires at least three negative darkfield examinations on successive days to eliminate syphilis before the diagnosis of chancroid is made. Requires a serological test for syphilis on admission, repeated once a week for the first month and at monthly intervals for three months unless a diagnosis of syphilis is established earlier. Indicates that additional diagnostic aid may be secured by stained smears or culture.

Discusses the Frei reaction and indicates that a diagnosis of lymphogranuloma venereum should not be made on the basis of a positive Frei reaction in the absence of clinical signs. The specific complement fixation test is not advised for general use. Diagnostic procedures to rule out syphilis are the same as those outlined in chancroid. Low titer false positive tests may occur.

Recommends smears or biopsy for the demonstration of Donovan bodies as an aid in the diagnosis of granuloma inguinale. Syphilis is to be eliminated in the manner as outlined under chancroid.

MED 159 May 1945. Amebiasis. Requires that cases in which motile ameba are demonstrated must be diagnosed as "dysentery, amebic". Cases in which there are no symptoms and cysts alone are found should be diagnosed "carrier of endamoeba histolytica". Stresses the value of proctoscopic examination in securing material for microscopic examination. Includes the general statements relative to identification.

Recommends that routine stool examinations of mess personnel should be made at intervals of six months or more often in highly endemic areas. Emphasizes the necessity of personal hygiene. In the treatment of water a concentration of chlorine sufficient to give two parts per million after thirty minutes is considered to destroy the cysts. Emphasizes the desirability of coagulation in the treatment of suspected water.

MED 160 May 1945. Medical and Sanitary Data on Japan.

MED 163 May 1945. Sanitary Control of Army Swimming Pools and Swimming Areas. Recommends at least weekly examination of water samples from swimming pools. None of the five 10 c.c. portions of water should be positive for coliform organisms and not more than 15% of the samples should contain more than two hundred colonies per c.c. when incubated twenty-four hours at 37°C. on standard agar.

MED 167 June 1945. Schistosomiasis Japonica. Includes a general description of the geographic distribution of symptoms. Describes in some detail the eggs and the miracidia. Recommends demonstration of the parasites by direct smear of the feces, sedimentation and ether sedimentation. Also includes therapy and preventive measures.

MED 168 June 1945. Diabetes Mellitus.

MED 172 June 1945. Treatment of Infectious Diseases with Sulfonamide Drugs. A general discussion including an outline of toxic manifestations.

MED 181 July 1945. Japanese B. Encephalitis. A revision of this TB MED can be expected. Contains a general discussion of the disease, including the materials necessary for laboratory diagnosis. The vaccine now available for use is of egg embryo origin.

MED 183 July 1945. Visceral Leishmaniasis - Kala-Azar. Contains a general discussion and includes photomicrographs. Includes all of the antiquated tests intended to demonstrate the extreme albumin globulin reversal seen in the disease. Requires demonstration of the organism either by smear or culture for a definitive diagnosis. Includes the procedure for spleen puncture. Recommends the inoculation of Hamsters and the use of NNN medium for culture.

MED 184 July 1945. Disinfection Procedures.

MED 190 1 August 1945. Water Treatment in Areas Where Amebiasis and Schistosomiasis are Hazards. Describes various types of water treatment for the prevention of this disease. Overlaps in part with TB MED 159.

Paragraph 14, which defines Medical Department responsibilities is "RESPONSIBILITY". a. General. The Medical Department is responsible for those factors in water supply that may affect health, such as advising and recommending on the sanitary suitability of water sources and water purification equipment; making periodic and special sanitary surveys of water supply systems and recommending corrective measures; supervising purification procedures; and instituting adequate sampling and testing programs to determine the safety and potability of the water. b. Sampling and testing. The Medical Department is responsible for making frequent routine tests to determine the chlorine residual and such bacteriological tests as are deemed necessary by the surgeon. Facilities for bacteriological tests and the institution of an adequate system of sampling and testing is the responsibility of the surgeon. Operational tests, including those for chlorine residual (at water points), pH, alkalinity, turbidity, taste and odor, are made by Corps of Engineers personnel."

MED 193 31 August 1945. Poliomyelitis. Indicates that virus isolation from brain or stool should be reserved for special epidemiological studies. Includes a fairly decent differential diagnosis.

MED 196 20 August 1945. Management of gonorrhea.

MED 198 20 August 1945. Management of Syphilis. Requires that an officer exercise close supervision of all darkfield examinations. Requires that in all cases with a penile ulcer routine serologic tests will be done on admission once weekly for the first month and monthly thereafter for two months unless the diagnosis is made earlier. Outlines the conditions in which false positive reactions may be expected, indicating that the majority will become negative within three months. Requires a three month's observation period for individuals showing positive serological tests but without clinical evidence of syphilis. On those individuals having a persistently positive reaction with a stabilized or rising titer on successive specimens during the three months period treatment will be instituted.

For patients treated with Penicillin monthly quantitative serological tests are required for a period of a year. At least one spinal fluid examination, which will include cell count, test for protein, complement fixation test; a colloidal gold test will be accomplished at the end of six months. Indicates that a serological relapse should be diagnosed only when a series of consecutive tests performed preferably in the same laboratory show persistently increasing titers over a period of three to four weeks.

MED 204 24 October 1945. Complications of Blood Transfusion. Contains a general discussion of complications of transfusion which includes Rh incompatability, pyrogenic reactions and preparation of intravenous sets.

MED 205 1 November 1945. Leprosy. Describes the common methods of biopsy for demonstration of *M. leprae*. (It is not indicated that these organisms are more readily decolorized with ordinary staining methods than are the organisms of tuberculosis).

MED 206 3 November 1945. Infectious Hepatitis. Includes a long chapter on the performance and interpretation of various tests. Gives the full technique for a simple urine bilirubin test, methylene blue test and a quantitative Ehrlich reaction. A full discussion of the Thymol-turbidity test and the bromsulfalein excretion test is included. Questions the advisability of the hippuric acid test.

MED 208 6 December 1945. Medical and Sanitary Data on Korea.

MED 212 16 January 1946. Neurotrophic Virus Diseases. Includes differential tables on the more common diseases. Briefly mentions the less well defined infections. Contains full instructions for the preparation and shipment of specimens for diagnosis.

MED 218 17 April 1946. Epidemic (Louse-borne) Typhus. States that a characteristic reaction in this disease is a high OX-19, a low OX-2 and a negative OX-K titer, and indicates that the results of no single test should be reported as significant. The maximum titer is reached about the third week. Discusses the use of complement fixation and Rickettsial agglutination indicating the necessity for examination and describing the reaction in vaccinated individuals. Also outlines procedure for recovery of Rickettsiae.

MED 221 29 April 1946. Diagnosis of Active Tuberculosis. Requires that tubercle bacillus be demonstrated at least twice by direct smear in the sputum before the diagnosis is made. Recommends that if the sputum is scanty that a forty-eight hour specimen be examined by one of the standard concentration methods. For practical purposes three negative examinations a week apart will be accepted as indicating that the sputum is negative, provided acid-fast bacilli are not found in the stomach contents. Describes the technique for securing samples of stomach contents and states that in all doubtful cases a virulence test on the culture organisms must be made.

Methods:

This section has been written to provide a readily available compendium of information contained in publications dealing with the actual performance of certain tests and with the best methods of submitting materials to other laboratories for confirmation or for primary work. In addition, where methods are not actually specified in official publications or where clarification seems desirable in order to obtain the desired standardization of technique entire procedures are included. Certain commonly observed errors with methods of correction are indicated.

Clinical Pathology:

This includes the procedures commonly performed in most dispensaries and all hospital laboratories.

Blood Counts: The inherent errors in all blood counts are not generally appreciated. As a rough rule a variation of 15 to 20% can be expected from day to day in total leukocyte and erythrocyte counts. The erythrocyte count is time-consuming and should be omitted in routine determinations if the hemoglobin level is more than 12 grams by any method.

Darkfield Examinations: Reference should be made to TB MED 198 for indications. In the performance of darkfield examinations the ordinary substage condenser is replaced by a special darkfield illuminator (#4317000). Equipment normally available in the Army has a built-in lamp bulb which operates on 6 volt current obtained from ordinary lighting current by means of a transformer. After this apparatus has been placed, the light turned on, and before placing the preparation to be studied on the stage, focus the low power objective on the upper surface of the illuminator lens. A small circle which is scratched on this surface will be seen. This circle represents the center of the lens and must be brought into the exact center of the field by means of the centering screws on the illuminator.

The material for examination is placed on a clean glass slide of correct thickness. The thickness of the slide that may be used is usually indicated on the illuminator mount. If the slide is too thick the object under study cannot be illuminated by the oblique rays coming from the illuminator. If the slide is too thin the illuminator may be racked down to the proper level. Cover the material with a clean coverglass (preferably No. 1) and press with clean paper or gauze to obtain a thin preparation.

Place a drop of immersion oil upon the illuminator (condenser) lens and then place the prepared slide in position. Raise the illuminator until fairly intimate contact between its upper surface and the bottom of the slide is obtained making certain that air bubbles are squeezed out of the oil. The thickness of the oil layer may be adjusted later in order to obtain proper illumination.

Examine the preparation first with the low-power objective and then with the high dry objective. The background should be dark and the bodies in the field brilliantly illuminated. By careful adjustment and by racking the illuminator up or down, proper illumination may be obtained. The illumination may be considered adequate when the serum colloids are seen as juggling pinpoints of bright light.

Prior to use of the oil-immersion objective it is removed and the suitable "funnel stop" inserted into the objective. The exact style varies depending upon the type of microscope. Replace the objective, put oil on the cover-slip and focus in the usual manner.

Good results are usually obtained if: (1) Clean slides and cover-glasses of correct thickness are used. (2) The special dark-field condenser is carefully centered. (The top of the condenser should be thoroughly cleansed in order to facilitate the finding of the centering circle). (3) The top of the condenser and the bottom of the slides are brought into close proximity and then adjustments made to correct for variation in slide thickness by raising or lowering the illuminator. (4) Air bubbles are removed from the oil between the condenser and the slide. (5) A thin rather than a thick preparation is made. (6) The presence of excessive amounts of large elements such as blood cells is avoided.

Gram Stain: Since this is the most important single stain utilized in diagnosis the following method with common sources of error is presented.

1. Stock Solution of Crystal Violet:

Crystal Violet ----- 24 grams
90% Ethyl Alcohol ----- 240 c.c.

Place crystal violet in a dry reagent bottle. Add the 90% alcohol, mix well by shaking. Filter through medium filter paper.

2. Ammonium Oxalate Solution:

Ammonium Oxalate ----- 2.4 grams
Distilled Water ----- 240 c.c.

Mix and shake well. Be sure all oxalate is dissolved.

3. Working Solution of Crystal Violet:

Crystal violet Stock (Sol. 1) — 50 c.c.
Ammonium Oxalate Solution (Sol 2) 250 c.c.

4. Iodine Solution:

Iodine Resublimed ----- 1.0 grams
Potassium Iodide ----- 2.0 grams
Distilled Water ----- 300 c.c.

Place iodine and potassium iodide in a flask. Add two or three c.c. of distilled water. Mix back and forth to form paste. Slowly add remainder of water with constant shaking.

5. Decolorizer ninety-five percent Ethyl alcohol, or ninety-five percent alcohol - acetone (50-50).

6. Counter Stain

Basic Fuchsin ----- 0.2 grams
Distilled Water ----- 190 c.c.

Place basic fuchsin in a reagent bottle. Add 10 c.c. of water. Agitate for a few minutes. Slowly add the remaining 180 c.c. of distilled water.

Prepare even smears, dry in air and fix by gentle heat. Overlay slide with crystal violet. Five to ten seconds later wash crystal violet off with tap water. Shake away excess water and overlay slide with iodine for thirty seconds. Wash; add decolorizer. As soon as color of slide is clear, wash with tap water. Now overlay with counter stain for thirty seconds. Blot slide; dry and read. If smear contains leucocytes, an excellent check on proper staining will be offered by the presence of gram negative leucocytes (pink stained pus cells) in the company of gram positive (purple) and gram negative bacterial cells on each slide. The normal urethral flora contains such contrasting organisms. Thus, usually it is possible to find gram positive and gram negative organisms on any properly stained urethral smear. In reading the slides the following must be considered:

1. Old alpha-hemolytic cocci and Staphylococci are often Gram negative.
2. Ducrey's bacillus, a gram negative bacillus, exhibits a wide range of morphology and often occurs in coccoid forms. Hence, two adjacent cocci-like bacilli of Ducrey may be mistaken for the gonococcus.
3. If an effort is always made to observe a small spot of light between the two "coffee bean" halves of the gonococcus, the gonococcus will not be confused with Ducrey's bacillus.
4. In acute cases of gonorrhea with numerous organisms there may be no other organisms present.

PART III

STATISTICAL

X. Evacuation

1. During the period 1 February 1947 to 28 February 1947, the following patients were evacuated from the several major commands:

	AIR	WATER	TOTAL
JAPAN	147	294	441
MARBO	69	0	69
PHILRYCOM	59	147	206
KOREA	143	0	143

2. The following are the evacuations per 1000 strength for the period 1 February 1947 to 28 February 1947:

	AIR	WATER	TOTAL
JAPAN	3.0	3.0	3.0
KOREA	2.3	2.3	2.3
MARBO	4.8	4.8	4.8
PHILRYCOM	2.3	2.3	2.3
THEATER	2.7	2.7	2.7

3. As of 28 February 1947 the following number of patients were awaiting evacuation:

	AIR	WATER	TOTAL
JAPAN	275	151	426
MARBO	10	50	60
PHILRYCOM	40	180	220
KOREA	112	88	190

XI. Hospitalization

1. The Bed Status Report as of 28 February 1947 is as follows:

	Total T/O Beds Present	Total T/O Beds Established	Total T/O Beds Occupied
JAPAN	4950	4950	4747
MARBO	525	525	237
PHILRYCOM	4275	3586	2253
KOREA	2100	1742	1400
Total	11,850	10,803	8,636

2. The number of authorized beds, percent of authorized beds occupied and percent of operating beds occupied for the period ending 28 February 1947 are as follows:

	<u>Beds Authorized</u>	<u>% Authorized Beds Occupied</u>	<u>% Operating Beds Occupied</u>
JAPAN	5072	93	96
KOREA	2049	68	80
MARBO	609	39	45
PHILRYCOM	2689	84	63
THEATER	10,419	83	79

3. Tables showing various admission rates are listed below:

ADMISSION RATES PER 1000 PER ANNUM

All Causes

<u>Week Ending</u>	<u>THEATER</u>	<u>MARBO</u>	<u>PHILRYCOM</u>	<u>JAPAN</u>	<u>KOREA</u>
7 Feb 47	1216	299	658	1516	1523
14 Feb 47	1237	346	663	1595	1410
21 Feb 47	1147	316	636	1525	1154
28 Feb 47	1035	345	573	1421	939

Disease

7 Feb 47	1151	227	607	1441	1462
14 Feb 47	1162	263	601	1515	1328
21 Feb 47	1081	207	580	1457	1091
28 Feb 47	968	253	515	1365	864

Injury

7 Feb 47	65	72	51	75	61
14 Feb 47	75	83	62	80	82
21 Feb 47	66	109	56	68	63
28 Feb 47	67	92	57	66	75

Psychiatric

7 Feb 47	13	7	12	11	20
14 Feb 47	18	7	5	25	24
21 Feb 47	10	7	3	10	17
28 Feb 47	14	3.3	18	15	11

ADMISSION RATES PER 1000 PER ANNUM

Organic Neurological Disease

Week Ending	THEATER	MARBO	PHILRYCOM	JAPAN	KOREA
7 Feb 47	0	0	0	0	0
14 Feb 47	.3	0	1.1	0	0
21 Feb 47	.3	0	0	.7	0
28 Feb 47	0	0	0	0	0

Common Respiratory Disease

7 Feb 47	411	11	82	545	662
14 Feb 47	431	11	79	607	612
21 Feb 47	386	51	84	523	554
28 Feb 47	362	46	69	508	505

Influenza

7 Feb 47	25	0	0	32	51
14 Feb 47	27	3.5	0	44	29
21 Feb 47	20	7	1.2	32	23
28 Feb 47	13	0	.6	23	12

Primary Atypical Pneumonia

7 Feb 47	15	7	2.9	19	26
14 Feb 47	20	14	2.3	24	35
21 Feb 47	16	7	6.0	10	43
28 Feb 47	19	10	2.4	16	51

Common Diarrhea

7 Feb 47	9	0	12	8	9
14 Feb 47	7	0	8	3.5	15
21 Feb 47	6	0	11	2.8	10
28 Feb 47	6	0	7	4.6	12

Bacillary Dysentery

7 Feb 47	2.8	23	5.7	0	.8
14 Feb 47	1.5	3.5	4.0	.3	0
21 Feb 47	.6	0	2.4	0	0
28 Feb 47	2.0	23	2.4	0	.8

2. The number of admissions to the hospital per 1000 beds occupied and percent of open beds occupied
and percent of open beds occupied
1947 are as follows:

ADMISSION RATES PER 1000 PER ANNUM

KOREA	JAPAN	PHILLYWOOD	THEATER	MARBO	PHILRYCOM	JAPAN	KOREA
<u>Amebic Dysentery</u>							
Week Ending							
7 Feb 47			3.3	0	10	1.0	0
14 Feb 47			3.8	0	13	0	0
21 Feb 47			5.0	0	17	0	0
28 Feb 47			2.8	0	10	0	0
<u>Malaria</u>							
7 Feb 47			10	3.5	35	0	1.6
14 Feb 47			14	3.5	42	2.1	3.3
21 Feb 47			11	0	38	.7	.8
28 Feb 47			11	0	39	.3	0
<u>Infectious Hepatitis</u>							
7 Feb 47			5	0	10	4.6	1.6
14 Feb 47			4.8	0	6	5.6	2.4
21 Feb 47			4.1	0	8	4.2	0
28 Feb 47			3.8	0	8	2.8	1.7
<u>Mycotic Dermatoses</u>							
7 Feb 47			2.3	0	2.9	3.2	0
14 Feb 47			2.8	3.5	4.0	3.1	.8
21 Feb 47			3.5	0	9.0	1.7	.8
28 Feb 47			2.8	0	4.2	3.5	0
<u>Venereal Disease</u>							
7 Feb 47			106	11	113	123	76
14 Feb 47			108	11	122	129	60
21 Feb 47			123	3.6	142	146	73
28 Feb 47			111	16	109	135	80